

REMARKS

Claims 1, 2, 4, 5, 8, 11, 14, 16-18, 20, 22-24, 28, 32, 36, 38, 42, 45-51, 53-58, 60, 62, 63, and 66-90 are pending in this application. Claims 45, 46, 49-51, and 53-58 are withdrawn. Claims 1, 2, 4, 5, 8, 11, 14, 16-18, 20, 22-24, 28, 32, 36, 38, 42, 45-51, 53-58, 60, 62, 63, and 66-90 are rejected and claims 8, 73-75, 83-85, and 89-90 are objected to. By this amendment, claims 2, 4, 5, 8, 11, 14, 16, 17, 20, 28, 62, 67, 73, 78, 83, 89, and 90 are amended, claims 1, 60, 70, 88 are canceled, and new claims 91-93 have been added.

On October 24, 2007, Applicant's undersigned representative conducted a telephone interview with Examiner James M. Hewitt seeking clarification regarding how the Office interpreted the claimed element "body" in the cited art. Examiner Hewitt indicated that the combination of the front ferrule and the body of Williams et al. was being interpreted as the element "body" in Applicant's claims. Applicant thanks the Examiner for the courtesies extended during the interview.

Objections to the Claims

Claims 8, 73-75, 83-85, and 89-90 are objected to for various informalities. The objected to claims have been amended as required by the Office action to overcome the objections.

Claim Rejections - 35 USC § 103

The Office Action rejected claims 1, 2, 4, 5, 8, 11, 14, 16-18, 20, 22-24, 28, 32, 36, 38, 42, 45-51, 53-58, 60, 62, 63, and 66-88 under 35 USC § 103(a) as being unpatentable over Williams et al. (USPN 6,131,963) in view of Spontelli (USPN 4,076,286) and claims 89 and 90 under 35 USC § 103(a) as being unpatentable over Williams et al. (USPN 6,131,963) in view of Spontelli (USPN 4,076,286) and further in view of Moreiras et al. (USPN 3,893,716).

Claim 28

Amended Claim 28 recites, in part, "a fitting comprising a body and a nut that can be joined and only a single ferrule; said body having an interior bore that receives the metal tube end along a longitudinal axis of the fitting; said bore having a camming surface at a first end of said bore and a generally radial shoulder facing the tube end at a second end of said bore . . . wherein the single ferrule . . . having a central bore formed by a continuous cylindrical interior

wall . . . wherein said camming surface forms an included angle of about thirty-five degrees to about sixty degrees with respect to said longitudinal axis.”

Williams et al. discloses a tube fitting having a body with a camming surface, a drive member, a first ferrule, and a second ferrule. Spontelli discloses a tube fitting having a coupling body 12 with a generally frusto-conical camming mouth 28, a coupling nut 34, a front ferrule 44 having a camming mouth 72 on its rearward end, and a back ferrule 46. Spontelli discloses that the camming mouth 28 on the coupling body 12 is about 15° to about 25° (see col. 3, lines 54-56) and the camming mouth 72 on the front ferrule 44 is about 30° to about 50°.

The cited Williams et al. (the ‘963 patent) and Spontelli patents are directed to two ferrule embodiments and neither discloses a fitting body comprising a bore having a camming surface at a first end of the bore and a generally radial shoulder facing the tube end at a second end of said bore where the camming mouth has an included angle of about thirty-five degrees to about sixty degrees. Williams et al. USPN 6,629,708 (the ‘708 patent), a patent based on a continuation-in-part application of the cited USPN 6,131,963, teaches the inventions therein may be applied in a single ferrule fitting (see col. 1, lines 20-21 of the ‘708 patent). The ‘708 patent, however, discloses the fitting body having a shallow camming angle of about 15° to about 25° like Spontelli.

The Office action takes the position that the front ferrule and the body, in combination, form the claimed element “body.” Applicant respectfully disagrees with this interpretation.

Although during examination pending claims are given their broadest reasonable interpretation by the Office, this interpretation must be consistent with the specification. MPEP § 2111. “The rules of the PTO require the application claims must ‘conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.’” MPEP § 2111 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir 2005)).

It is completely unsubstantiated how or why a person of ordinary skill in the art of fittings would consider any of the illustrated embodiments in Williams et al. (‘963 patent) or Spontelli as being a single ferrule system. Applicant’s background clearly explains and distinguished the very same ‘963 patent being used by the PTO for this rejection. An interpretation that plainly ignores Applicant’s own disclosure cannot be a “reasonable interpretation.”

The specification of the current application, and the specifications of Williams et al. and Spontelli, all consistently distinguish between ferrules in a fitting and a fitting body. Note that all three specifications use the term “body” when referring to the structure that the tube end abuts. It is the use of the words in the context of the written description and customarily by those skilled in the relevant art that accurately reflects both the “ordinary” and the “customary” meaning of the terms in the claims. MPEP 2111.01 (citing *Ferguson Beauregard/Logic Controls v. Mega Systems*, 350 F.3d 1327, 1338, 69 USPQ2d 1001, 1009 (Fed. Cir. 2003)). A person of ordinary skill in the art would not understand “body”, as claimed and used in the specification, to include a ferrule that moves axially and deforms during pull-up.

Applicant clearly explains in the present specification that, functionally, a 45-degree camming angle on the back of the front ferrule in a two ferrule system is entirely different than a 45-degree camming angle on a fitting body. For example, Applicant’s specification, when referring to a prior art two ferrule design, states “the front end of the back ferrule cams against a frusto-conical camming surface formed in the back end of the front ferrule. The ostensible angle of this camming surface is forty-five degrees, but due to the sliding movement of the front ferrule, the effective camming angle is actually a shallow angle of about fifteen to twenty degrees” (see 4th paragraph from the end of the Background section). Thus, interpreting the claimed “body” in claim 28 to include both the body and front ferrule of Williams et al. is completely inconsistent with Applicant’s own teaching.

Applicant respectfully submits that interpreting the body and the front ferrule of Williams et al. or Spontelli as a “body” to result in a fitting having only a single ferrule is unnecessarily confusing and inconsistent with the use of those terms in the specifications and how one of ordinary skill would interpret “body” based on Applicant’s disclosure and therefore improper. Therefore, the proposed combination of Williams et al. and Spontelli fails to teach each and every element of amended claim 28. Thus, Applicant respectfully submits that claim 28, as amended, and the claims that depend therefrom, is not rendered obvious by the proposed combination.

Claims 67, 78

Amended claims 67 and 78 both recite “only a single ferrule” and a fitting component having an interior bore that receives a metal tube end along a longitudinal axis of the fitting, where the bore has a camming surface at a first end and a generally radial surface facing the tube end at a second end and where the camming surface forms an included angle of about thirty-five degrees to about sixty degrees with respect to said longitudinal axis. For the reasons stated above regarding the rejection of independent claim 28, the proposed combination of Williams et al. and Spontelli fails to teach each and every element of amended claims 67 and 78. Thus, claims 67 and 78, and the claims that depend therefrom, are patentable over the cited art at least for the same reason claim amended 28 is patentable over the cited art.

New Claims


New claims 91-93 are fully supported by the specification, do not contain new matter, and are patentable over the cited art. In particular, the new claims all contain, or depend from a claim that includes a camming surface on the body that forms an included angle of about thirty-five degrees to about sixty degrees with respect to said longitudinal axis and only a single ferrule. Thus, claims 91-93 are patentable over the cited art at least for the same reason claim 28 is patentable over the cited art.

CONCLUSION

Based on the foregoing amendments and remarks, Applicant believes that all of the claims in this case are now in condition for allowance and an indication to that effect is respectfully requested.

Respectfully submitted,

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